

ER Site No. 151: Bldg 9940 Septic System

ADS: 1295

Operable Unit: Septic Tanks and Drainfields

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Site History

ER Site 151 includes the septic system serving Building 9940 and surface outfalls from Buildings 9940 and 9940A. Building 9940 is located west of Lovelace Road, approximately 1.0 mi east of Area III, in Coyote Test Field. The building was constructed in 1962 as an explosives test facility. It was converted to a U.S. Nuclear Regulatory Commission (NRC) testing facility in 1978. The NRC tests included dropping superheated metals containing iron and aluminum into vats of cooling water, using depleted uranium (DU) to simulate nuclear reactor settings. Wastewater from the tests was discharged onto the ground surface or into the septic system. Inactive facilities at Building 9940 include an underground chamber that was used to store DU components and a darkroom from which photoprocessing chemicals and organic compounds such as acetone, toluene, and MEK may have been discharged into the septic system.

The septic system consists of a 1000-gal septic tank and a 6.5-ft in diameter by 15-ft deep seepage pit located on the northwest side of Building 9940. The system received discharge from sinks and drains in the building. Estimates of effluent discharged to the septic system range between 40 gal/day and 400 gal/day. A surface outfall located on the southwest side of the building and connected to floor drains in Building 9940A may have received explosives residue and DU. A second surface outfall, located within a few feet of the first outfall, drains a concrete settling tank that received liquid waste from floor drains in the underground storage chamber. The septic system at this site is no longer in use, and restroom and sink effluent is discharged to an extension of the SNL sanitary sewer system. The floor drain outfalls have been blocked.

The site is approximately 146 meters (474 feet) above the regional water table.

Constituents of Concern

Constituents of concern include DU, explosives residue, photoprocessing chemicals (silver, cadmium, hexavalent chromium, and cyanide), and organic compounds (acetone, toluene, MEK, trichloroethylene (TCE), and PCE).

Current Hazards

There are no known current hazards at this site related to contamination of the surface or subsurface soils. There may be structures or stored materials that remain at the site that are a potential hazard.

Current Status of Work

The septic tank was sampled for waste characterization in 1994.

A passive soil gas survey was conducted around the septic tank and seepage pit in the summer of 1994, but no Volatile Organic Compounds (VOC) anomalies were detected.

Soil sampling around the two surface outfalls, the septic tank, and the seepage pit were conducted in the fall of 1994 and early 1995. Analytical results for the soil samples collected indicate that no significant concentrations of hazardous or radioactive materials were released to the environment at this site.

The waste from the septic tank and settling tank was removed and the empty tanks inspected by NMED in late 1995. The septic tank was decontaminated, and concrete samples were collected from the tank to verify that no COCs remained. The tanks were then backfilled with clean soil.

In response to requests by and negotiations with NMED/HRMB and DOE OB, this and four other ER septic system sites with seepage pits were selected for re-sampling of soil from directly beneath the seepage pits. This re-sampling was completed in January 1998. Soil samples had been previously collected from a pair of borings located on either side of the seepage pit, but this method was considered inadequate by NMED. Analytical results for soil samples collected from directly beneath the three seepage pits were not significantly different from the analytical results for soil samples collected on either side of the seepage pits. NMED regulators agreed with this conclusion, and determined that additional soil sampling beneath the seepage pits would not be required.

A confirmatory sampling No Further Action (NFA) proposal for this site was submitted to the NMED/HRMB in July 1996. NMED issued a Request for Supplemental Information (RSI) in June 1998, and SNL/NM responded to that RSI in November 1998. In June 2000, NMED found Site 151 to be acceptable for NFA. The NFA was approved by NMED on November 19, 2001, after completing the public review and permit modification process.

Future Work Planned

No future work is planned.

Waste Volume Estimated/Generated

Five drums of radioactive waste were generated.

Information for ER Site 151 was last updated Mar 12, 2002.